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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,306	02/09/2001	Daniel Pompei Cedrone	1246.1	6764
21176	7590	12/01/2003	EXAMINER	
SUMMA & ALLAN, P.A. 11610 NORTH COMMUNITY HOUSE ROAD SUITE 200 CHARLOTTE, NC 28277			PICKARD, ALISON K	
			ART UNIT	PAPER NUMBER
			3676	

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/780,306	POMPEI, DANIEL	
	Examiner	Art Unit	
	Alison K. Pickard	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7, 10-16 and 29-36 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-7, 10-16 and 29-36 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the disclosure (including the drawings) does not disclose a hinge having an upper knuckle that rotates and separates from the bushing and has a polymeric sleeve. (see claim objections for further explanation).

Appropriate correction is required.

Claim Objections

2. Claims 1-7, 10-16, and 29-32 are objected to because of the following informalities: claim 1 sets forth a bushing and a sleeve, which is received in the upper knuckle. However, the claim also requires the upper knuckle to separate from the bushing when it rotates. The specification has discloses an integral bushing with sleeve. So, how can the upper knuckle separate from the bushing if the sleeve is in the upper knuckle?

Claim 6, how can the spindle be integral with the upper knuckle when the knuckle has a sleeve?

Claim 10, is this a second sleeve, i.e. different from the sleeve set forth in claim 1?

Applicant is advised that should claims 12-15 be found allowable, claims 29-32 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 10, 11, 15, 16, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes in view of Douglas.

Rhodes discloses a gravity hinge (fence and gate) consisting essentially of an upper cylindrical knuckle 7A having a first surface and an opposing second, oblique surface 28, a lower cylindrical knuckle having a first, oblique surface 24 and a second surface, and a spindle 23. The spindle extends from the first surface of the lower knuckle into a recess in the upper knuckle. The spindle can be integral with the lower knuckle. As seen in Figures 3 and 4, the knuckles are oblique across their entire surface. Rhodes does not disclose a polymeric, oblique bushing and sleeve within the upper knuckle. Douglas teaches a gravity hinge having an upper knuckle, lower knuckle, and spindle. Douglas teaches the use of a polymeric sleeve/bushing 10. The bushing 11 is between the two knuckles and reduces friction and wear between the metal components. The sleeve 10 is received in a knuckle and reduces friction and provides smooth rotation of the spindle (see col. 2, lines 42-48). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the hinge of Rhodes with the sleeve/bushing taught by Douglas to reduce friction, reduce, wear, and provide smooth rotation.

Regarding the requirement for an “oblique” bushing such that the bushing and knuckles form a continuous cylinder, it appears that Rhodes in view of Douglas would produce the claimed invention. Douglas teaches a bushing (flange) that is shaped to continuously contact the adjacent knuckle surfaces to form a continuous cylinder in a resting position (see Fig. 2). Also, since the surfaces of Rhodes’ knuckles are oblique, it is inherent the bushing would be too. Toedt provides evidence that it is known to use an “oblique” bushing between oblique knuckle surfaces in a gravity hinge.

Regarding the requirement for the sleeve to be within the upper knuckle, it appears Rhodes in view of Douglas would produce the claimed invention. While Douglas may show the sleeve in the lower knuckle, it is not limited to that location. It is well known in the art that a sleeve can be located in the upper and/or lower knuckle as evidenced by Rommelfaenger, Finkelstein, Takimoto, and Suska. Rhodes also shows that a sleeve can be located in the upper knuckle. Finally, Douglas shows a sleeve located in a knuckle that is not integral with the spindle. Since, the upper knuckle of Rhodes is not integral with the spindle, it would be obvious to place the sleeve in the upper knuckle.

Regarding claims 4, 5, and 7, Rhodes does not disclose that the lower knuckle has a recess for receiving the spindle. It is known in the art to make the hinge of 2 (i.e. the spindle integral with one of the knuckles) or 3 (i.e. two knuckles and a spindle) components as evidenced by Fletcher, Suska, Rodler, Booraem, Matyas, and Foltz (for example). Making the knuckle into separable parts (i.e. a spindle and hollow knuckle) is considered a design choice. See *In re Dulberg*, 129 USPQ 348, 349 (CCPA 1961). Therefore, it would have been obvious for one of

ordinary skill in the art at the time the invention was made to modify the hinge such that the spindle is separate from the lower knuckle as such is a design choice known in the art.

Regarding claim 6, the spindle is considered integral with the upper knuckle in that it is connected to form one piece.

5. Claims 12-14 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhodes in view of Douglas as applied to claim 1 (and 17) above, and further in view of Gidseg (4,864,691).

Rhodes does not disclose the material of the knuckles. Gidseg teaches are equivalent materials for hinge knuckles (col. 11, lines 32-42). Gidseg teaches metal, polymers, and ceramics, as being equivalent materials for hinges. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the knuckles out of metal, ceramic, or polymers as such are suitable materials for hinges as taught by Gidseg.

Response to Arguments

6. Applicant's arguments filed 9-17-03 have been fully considered but they are not persuasive and are considered moot in view of the new grounds of rejection.

Note: Rhodes in view of McKinney, Toedt and Suska also discloses the claimed invention. Suska teaches a bushing/sleeve to reduce friction, wear, and noise.

In response to applicant's argument that Douglas teaches away from Rhodes (and Applicant's hinge), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case,

Douglas identifies that excessive wear is a problem in hinges (see col. 1, lines 32-34). Douglas uses the flanged sleeve to solve this problem. The sleeve reduces friction and wear between the knuckle end faces.

Further, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Rhodes already teaches inclined surfaces (of knuckles). Douglas is being applied for its teaching of the use of a flanged sleeve to reduce friction and wear.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (9-6:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-1113.



Alison K. Pickard
Examiner
Art Unit 3676